IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A computer implemented method of scheduling orders for multiple different products or services, the method comprising:

creating a list of activities required to accomplish the orders;

modifying selected activities into sets of smaller activities; and

scheduling the activities and smaller activities based on discrete and continuous constraints, wherein the continuous constraints are related to other variables by linear mathematical relationships, and wherein separate engines process the discrete and continuous constraints and propagate additional constraints to each other to produce a schedule for the activities.

2. (Original) The method of claim 1 wherein modifying selected activities is performed as a function of integrated implications of the discrete and continuous constraints.

3. (Original) The method of claim 1 wherein modifying selected activities comprises determining if an activity is larger than a predetermined threshold.

4. (Original) The method of claim 1 wherein modifying selected activities comprises determining if an activity occurs slower than a predetermined threshold.

5. (Currently Amended) The method of claim 1 and further comprising defining discrete and continuous constraints related to the activities based on requirements of the orders.~~tasks.~~

6. (Original) The method of claim 5 wherein activities are assigned start and end times.

7. (Original) The method of claim 5 wherein activities are scheduled based on deadlines.

8. (Currently Amended) The method of claim 5 wherein the requirements of the ~~task~~ orders comprise identification of resources required to perform the orders~~task.~~

9. (Original) The method of claim 8 wherein activities are assigned resources based on a resource balancing heuristic.

10. (Cancelled).

11. (Cancelled).

12. (Previously Presented) A computer implemented method of scheduling tasks comprising:

creating a list of activities required to accomplish the tasks;

modifying selected activities into sets of smaller activities;

scheduling the activities and smaller activities based on discrete and continuous constraints;

identifying infeasibilities during the scheduling of activities;

identifying a culprit activity when an infeasibility is identified; and

chronological backtracking to the culprit activity which resulted in an infeasibility.

13. (Original) The method of claim 1 and further comprising identifying suboptimalities during the scheduling of activities and identifying culprit activities causing the suboptimalities.

14. (Previously Presented) A computer implemented method of scheduling activities comprising:

defining discrete and continuous constraints related to the activities;

representing selected scheduling decisions as discrete and continuous constraints; and

scheduling activities in accordance with integrated implications of the discrete and continuous constraints, wherein separate engines process the discrete and continuous constraints and propagate additional constraints to each other to produce a schedule for the activities.

15. (Previously Presented) The method of claim 14 and further comprising:
scheduling activities in accordance with previous scheduling decision constraints;
identifying infeasibilities during the scheduling of activities; and
scheduling activities in accordance with identified infeasibilities.

16. (Previously Presented) The method of claim 15 and further comprising:
identifying a culprit activity which resulted in an infeasibility; and
backtracking to the culprit and rescheduling the culprit activity.

17. (Original) The method of claim 16 and further comprising identifying a culprit activity which resulted in a suboptimality.

18. (Previously Presented) A computer implemented method of scheduling activities comprising:
defining discrete and continuous constraints related to the activities;
representing selected scheduling decisions as discrete and continuous constraints;
scheduling activities in accordance with integrated implications of the discrete and continuous constraints;
scheduling activities in accordance with previous scheduling decision constraints;
identifying infeasibilities during the scheduling of activities;
scheduling activities in accordance with identified infeasibilities;
identifying a culprit activity which resulted in an infeasibility; and
chronological backtracking to the culprit and rescheduling the culprit activity

19-26. (Cancelled).

27. (Previously Presented) A machine readable medium having computer executable instructions stored thereon for causing a computer to perform a method of scheduling tasks comprising:
creating a list of activities required to accomplish the tasks;

modifying selected activities into sets of smaller activities; and

scheduling the activities and smaller activities based on discrete and continuous constraints, wherein the continuous constraints are related to other variables by linear mathematical relationships, and wherein separate engines process the discrete and continuous constraints and propagate additional constraints to each other to produce a schedule for the activities.

28. (Previously Presented) A machine readable medium having computer executable instructions stored thereon for causing a computer to perform a method of scheduling activities comprising:

defining discrete and continuous constraints related to the activities, wherein the continuous constraints are related to other variables by linear mathematical relationships;

representing selected scheduling decisions as discrete and continuous constraints; and

scheduling activities in accordance with an integrated implications of the discrete and continuous constraints, and wherein separate engines process the discrete and continuous constraints and propagate additional constraints to each other to produce a schedule for the activities.

29-31. (Cancelled).

32. (Currently Amended) A memory for access by an application program for scheduling tasks being executed on a computing system ~~system for scheduling tasks~~ comprising:

a continuous constraint solver engine;

a discrete constraint solver engine; and

means for integrating the engines to schedule activities to accomplish the tasks taking into account both continuous constraints and discrete constraints, wherein the continuous constraints are related to other variables by linear mathematical relationships, and wherein separate engines process the discrete and continuous constraints and propagate additional constraints to each other to produce a schedule for the activities.

33. (Cancelled).

34. (Cancelled).

35. (Currently Amended) The method of claim 1 wherein the schedule is modified by repeating the method after removing ~~tasks~~ orders already completed.